

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A fluid spray head assembly comprising:
a spray head comprising an expulsion channel (5) provided with a spray orifice (1) and a spray profile (10) formed in an end wall of said spray head, said spray profile (10) comprising preferably non-radial spray channels (11) opening out to a central spray chamber (12) disposed directly upstream from said spray orifice (1); and
an insert (20) forming an internal nozzle, the insert being introduced through the inside of the spray head and being disposed in said expulsion channel (5) so as to form a base surface for said spray profile (10), the central axis (X) of said insert (20) being substantially identical to the central axis (Y) of said expulsion channel (5);
wherein said spray head including comprises centering means for centering said insert (20), the spray head being characterized in that wherein said expulsion channel (5) includes said centering means for centering said insert (20), and in that said centering means are formed in the proximity of the spray profile (10); and
wherein the central spray chamber is between the spray orifice of the spray head and the insert;
wherein the insert is formed separately from the spray head.

2. (currently amended): A spray head assembly according to claim 1, in which said centering means comprise at least one projection (30), and preferably three, the diameter of the inscribed circle defined by said projections being substantially identical to the diameter of the insert (20).

3. (currently amended): A spray head assembly according to claim 2, in which the expulsion channel (5) includes three flat surfaces (30) that are distributed symmetrically about said channel, said flat surfaces (30) co-operating with said insert (20) so as to center it relative to said expulsion channel (5).

4. (currently amended): A spray head assembly according to claim 2, in which the accesses of the expulsion channel (5) to the spray channels (11) are formed between said projections.

5. (currently amended): A spray head assembly according to claim 1, in which the central axis (X) of said insert (20) is offset from the central axis (Y) of the expulsion channel (5) by a distance that is less than 0.08 mm, and preferably less than 0.03 mm.

6. (currently amended): A spray head assembly according to claim 1, in which said spray chamber (12) has a diameter of 1 mm.

7. (currently amended): A spray head assembly according to claim 1, in which said spray orifice (1) has a diameter of 0.3 mm.

8. (currently amended): A set of spray ~~heads~~ head assemblies according to claim 1, wherein the spray head of each spray head assembly is manufactured from a common mold cavity, ~~the set being characterized in that said heads are made according to claim 1.~~

9. (currently amended): A set of spray head assemblies according to claim 8, in which the standard deviation of the offset of the central axis (X) of the insert (20) relative to the central axis (Y) of the expulsion channel (5) for any spray head coming from a common mold cavity is less than 0.05 mm, and advantageously less than 0.02 mm.

10. (currently amended): A fluid dispenser device characterized in that it includes a spray head assembly according to claim 1.

11. (currently amended): A fluid spray head assembly, comprising:
a spray head comprising an internal nozzle comprising an expulsion channel comprising,
a spray orifice and a spray profile formed in an end wall of the internal nozzle, the spray profile comprising spray channels opening out to a central spray chamber disposed upstream from the spray orifice;

an insert disposed in the expulsion channel so as to form a base surface for the spray

profile, the insert forming ~~an~~the internal nozzle and the spray head configured with an upstream opening to permit the insert to be introduced inside the spray head only from the upstream opening in the spray head, and wherein, a central axis of the insert is substantially identical to a central axis of the expulsion channel; and

at least one radial projection extending from an inside wall of the expulsion channel and abutting the insert so as to substantially align the central axis of the insert with the central axis of the expulsion channel; and

wherein the central spray chamber is between the spray orifice of the spray head and the insert;

wherein the insert is formed separately from the spray head.

12. (currently amended): The fluid spray head assembly according to claim 11, wherein the spray channels are non-radial.

13. (currently amended): The fluid spray head assembly according to claim 11, further comprising at least two additional projections extending from the inside wall of the expulsion channel and abutting the insert so as to substantially align the central axis of the insert with the central axis of the expulsion.

14. (currently amended): The fluid spray head assembly according to claim 11, further comprising at least two additional projections extending from the inside wall of the expulsion

channel, and wherein a diameter of an inscribed circle defined by the three projections is substantially identical to a diameter of the insert.

15. (currently amended): The fluid spray head assembly according to claim 14, wherein the three projections define three flat surfaces distributed symmetrically about the central axis of the expulsion channel.

16. (currently amended): The fluid spray head assembly according to claim 14, wherein access from the expulsion channel to the spray channels is between the projections.

17. (currently amended): The fluid spray head assembly according to claim 1, wherein the spray head is configured to couple to a dispensing member.

18. (currently amended): The fluid spray head assembly according to claim 11, wherein the fluid spray head is configured to couple to a dispensing member.